

UNITED STATES DEPARTMENT OF AGRICULTURE
Rural Utilities Service
Technical Standards Committee "A"

Supplement No. 1, October 2005, to
RUS Informational Publication 202-1,
List of Materials Acceptable for Use on
Systems of RUS Electrification Borrowers

The attached pages dated October 2005, for the "List of Materials Acceptable for Use on Systems of RUS Electrification Borrowers" are those which have been revised by action of the Technical Standards Committees during the months of July through September, 2005. They replace pages dated July 2005. The following changes should be made in order to keep RUS Informational Publication 202-1 up to date.

Revised
Pages

d-1
k(2.1) Cond.
af-2
an(3) Cond.
bx(1) Cond.
cm(1) Cond.
rp(1) Cond.
rp(2) Cond.
U gn-2
U hv(2) Cond.

d - Washers, Flat

Flat Rolled Steel

Size, inches:	2-1/4 x 2-1/4	3 x 3	4 x 4	4 x 4	1-3/8 round	1-3/4 round
Thickness, in.:	3/16	1/4	3/16	1/2	12 gauge	10 gauge
Hole Diam., in.:	13/16	13/16	13/16	13/16	9/16	11/16
Allied Bolt	11550	11551	-	-	104	-
C & C Spacer	4	-	-	-	-	-
FWC	FW1076	-	FW1080	-	FW1086	FW1088
Hubbell (Chance)	6814	6817	6818	6819-1/2	6803	6805
Hughes	SW2-1/4-70-3/16	SW3-70	SW4-70	SW4-70(1/2)	RW1-3/8-50	-
Joslyn	J1076	J1079	J1080	-	J1086	J1088
Kortick	K1553	K1555	K1557	K1559-1/2	K1524	K1525
Line Hardware	SWF-225B	SWF-300B	SWF-400A	-	-	-
MacLean (Continental)	U5485	U5487A	U5488	U5490A	U5478	U5479
Wrought Washer	011206	-	-	-	-	-

Flat Cast

Size, inches:	3 x 3
Thickness, in.:	1/4
Hole Diam., in.:	13/16
Hubbell (Chance) (N)	BB214
Joslyn (Flagg) (N)	P56A

Spurred - 3" Round, 3/16" Thick, 13/16" Hole

MacLean (Continental)	TCSF-30-6
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(A) Aluminum Alloy
(M) Malleable Iron
(N) Nodular Iron

k - Insulator, polymer distribution deadend

Manufacturer	Conditions
<u>Salisbury</u>	
Distribution deadend	1. To obtain experience.
9501 Series, 15 kV	2. For use as deadends on distribution lines only.
9502 Series, 25 kV	3. Not recommended for use in areas subject to contamination.
9501U-SI (silicone - 15 kV)	
9502U-SI (silicone - 28 kV)	
9503U-SI (silicone - 35 kV)	
9502L-EP (EPDM - 28 kV)	
<u>Sediver</u>	
Distribution deadend	1. Same as (1) above.
ODI-11-70-15 (15 kV)	2. Same as (2) above.
ODI-15-70-28 (25 kV)	3. Same as (3) above.
ODI-17-70-35 (35 kV)	
<u>Victor Insulators, Inc.</u>	
Distribution deadend	1. Same as (1) above.
8015 (15kV)	2. Same as (2) above.
8025 (25kV)	3. Same as (3) above.
8035 (35kV)	
8215 (15kV)	
8225 (25kV)	
8235 (35kV)	
<u>Volt Tek</u>	
Distribution deadend	1. Same as (1) above.
1515-00 (EPDM - 15 kV)	2. Same as (2) above.
2515-00 (EPDM - 25 kV)	3. Same as (3) above.
3515-00 (EPDM - 35kV)	
1515S-00 (Silicone - 15kV)	
2515S-00 (Silicone - 28kV)	
3515S-00 (Silicone - 35kV)	

NOTE: When insulators from this page are used, adjust construction drawing material list quantities as necessary. Recommended maximum working load is 5000 lbs.

af - Power Fuses, Substation

Manufacturer	Type	Voltage Rating (kV)
Cooper Power Systems	CMU (Boric acid, non refillable)	15-34.5
Eaton (Cutler-Hammer)	RDB (Boric acid, refillable)	15-34.5
	DBA (Boric acid, non-refillable)	46-69
	DBU (Boric acid, non-refillable)	15-34.5
Kearney/Cooper Power Systems	HX	15
	HX	27
S & C Electric*	SMD (Boric Acid)	15-138
Southern States	Series P	15-161

*Available with porcelain insulators. Available with "Cypoxy" cycloaliphatic epoxy insulators 34.5 kV on request.

NOTE: All fuses listed on this page should be furnished with NEMA standard insulators. The buyer should specify the current rating, voltage rating, interrupting rating and required accessories.

an - Transformers, Power
Three-Phase, Step-Down
for Distribution Substation Use

Conditions for Acceptance: "E" - To obtain experience
"T" - Manufacturer to furnish RUS with satisfactory test results
(Only performance specifications have been submitted)

Manufacturer	Primary Voltage - kV	Nominal OA Capacity	
		750 to 3750 kVA	5 to 30 MVA
<u>Delta Star</u>	34.4	E	E
	43.8	E	E
	67.0	E	E
	115	-	E
	138	-	T

Transformers 5 MVA and larger also accepted as load tap changing transformers using Seimens-Allis Types TLS and TLH-21 load tap changers.

<u>Ferranti-Packard</u>	34.4	E	T
	67.0	T	E
	115	-	E

<u>GE-Prolec</u>	67	-	E
	115	-	E
	138	-	E

Transformers 5 MVA and larger also accepted as load tap changing transformers using Reinhausen type RMV-II, Reinhausen type RMV-A, and ABB type UZE load tap changers.

<u>Hyundai Heavy Industries Co., Ltd.</u>	115	-	E
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Transformers 5 MVA and larger also accepted as load tap changing transformers using ABB type UZE and Reinhausen type RMV-II load tap changers.

<u>Industrias IEM, S.A. de C.V</u>	115	-	E
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<u>MGM</u>	34.4	E	T
	43.8	E	T
	67.0	T	E

Transformers 5 MVA and larger also accepted as load tap changing transformers using ABB Types UTS-A and UTT-B load tap changers.

<u>Pauwels Transformers</u>	34.4	-	E
	67.0	-	E
	115	-	E

<u>Uptegraff</u>	34.4	T	E
	43.8	T	E

<u>Virginia Transformer</u>	67.0	-	E
	115	-	E
	138	-	E

Transformers 5 MVA and larger also accepted as load tap changing transformers using ABB type UZE and Reinhausen type RMV-2 tap changers

bx - Splice, automatic

Manufacturer	Conditions
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DISTRIBUTION

Blackburn

#4, #2 ACSR or 6201 (ACSR equiv.) ATS42	1. To obtain experience.
1/0, 2/0 ACSR or 6201 (ACSR equiv.) ATS1020	2. For use on distribution systems only.
3/0, 4/0 ACSR or 6201 (ACSR equiv.) ATS3040	
266.8, 336.4 kcmil ACSR ATS266336	
477 kcmil ACSR ATS397477	

Connector Products, Inc.

2 ACSR (S1000)	1. To obtain experience.
#1 ACSR (S1000)	2. For use on distribution systems only.
#2 AAC (S1000)	
1/0 AAC (S1000)	
2/0 AAC (S1000)	
#2 AAAC (S1000)	
1/0 AAAC (S1000)	

Hubbell (Fargo)

AWAC 4 - 4/3 GLA-105	Same as above.
AWAC 2 - 4/3 GLA-110	
AWAC 1/0 - 4/3 GLA-115	

266.8 kcmil ACSR 18/1 GL-410	Same as above.
336.4 kcmil ACSR 18/1 GL-411	
477 kcmil ACSR 18/1 GL-413	

MacLean (Reliable)

266.8 kcmil ACSR 18/1 7657	Same as above.
336.4 kcmil ACSR 18/1 7658	
477 kcmil ACSR 18/1 7659	

DISTRIBUTION AND TRANSMISSION

Hubbell (Fargo)

266.8 kcmil ACSR 26/7	To obtain experience.
336.4 kcmil ACSR 26/7	
477 kcmil ACSR 26/7	

Conditional List
cm(1)
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cm – Insulators, spool (Polymer)

Manufacturer	Conditions
Hendrix Wire and Cable HPI-53-2 (ANSI Class 53-2)	To obtain experience
Hubbell (Chance) C909-1032P (ANSI Class 53-2)	To obtain experience.

rp - Wildlife Guards
Bushings and Live Parts Covers

Manufacturer	Conditions
<u>Chris Kaye (Crittter Guard)</u>	
201 - "L" Bracket	To obtain experience.
202 – Roller	
203 - Wheel	
<u>Hendrix Wire & Cable</u>	
BG-9 Bushing Cover	To obtain experience.
<u>Hendrix (Eco Electrical Systems, Inc.)</u>	
EICG-1 Insulator/Conductor Cover	
EICG-1-WLPT Insulator/Conductor Cover	To obtain experience.
EICG-1-20 Insulator/Conductor Cover	
EICG-1-32 Insulator/Conductor Cover	
<u>Kaddas Enterprises Inc.</u>	
KE1045A* Birdguard	To obtain experience.
KE1066* Arrester cap	
KE1077* Bushing cover	
KE1053* Arrester cap	
KE1064* Bushing cover	
KE 1049* Birdguard	
<u>Tripp (Eco Electrical Systems, Inc.)</u>	
ECC-1 Cutout Cover	
ECC-2-27-150BIL-S&C-Version 10 Cutout Cover	To obtain experience.
ECC-3-27-150BIL-S&C-Version 9 Cutout Cover	
ECC-4-27-125BIL-S&C-Kearney HX Cutout Cover	
ECC-5-ABB-LBU Cutout Cover	
<u>Universal Thermography, Inc.</u>	
TGB-50007 Bushing Cover	To obtain experience.
TGB-65010 Bushing Cover	
TGB-82512 Bushing Cover	
<u>W. H. Salisbury & Co.</u>	
21116 Bushing Cover	To obtain experience.
21317 Tri-Port Bushing Cover	
BC512 Cone Bushing Cover	
38-2SC Stinger Cover 3/8" IDx2'	
38-12SC Stinger Cover 3/8" IDx12'	
38-18SC Stinger Cover 3/8" IDx18'	
38-50SC Stinger Cover 3/8" IDx50'	
38-100SC Stinger Cover 3/8" IDx100'	
58-12SC Stinger Cover 5/8" IDx12'	
58-50SC Stinger Cover 5/8" IDx50'	
58-100SC Stinger Cover 5/8" IDx100'	
34-12SC Stinger Cover 3/4" IDx12'	
34-25SC Stinger Cover 3/4" IDx25'	

NOTE: The material composition of these items does not contain a flame-retardant unless specified by the manufacturer.

*Specified by manufacturer as being flame-retardant

Anti-Perch Devices

<u>Manufacturer</u>	<u>Conditions</u>
<u>Hendrix Wire & Cable</u> Catalog No. HPP-24	To obtain experience

NOTE: The material composition of these items does not contain a flame-retardant unless specified by the manufacturer.

U gn - Enclosures, Equipment

Sectionalizing Enclosures

<u>Manufacturer</u>	<u>Catalog No.</u>
<u>Brooks Utility Products Group</u>	<u>Single Phase</u> 750-7437-001, 750-7437-002, 750-7437-003, 750-7437-004 <u>Three Phase</u> 750-7438-001, 750-7438-002, 750-7438-003, 750-7438-004, 750-7438-005, 750-7438-006, 750-7438-007
<u>Cooper Power Systems</u>	SecTER Series I and II (Single-Phase and Three-Phase)
<u>Durham</u>	AMSP() Series
<u>Fiberglass Fabricators</u>	FSC-32 Single Phase FSC-62 Three Phase
<u>Howard Industries</u>	Catalog No. 4548-268770-200, single-phase and 4578-268770-200 three-phase, pad-mounted
<u>Malton Electric</u>	ME Series MEH Series
<u>Maysteel</u>	CW200 Series CW300 Series
<u>Nordic</u>	ND-Series
<u>Power Design Inc.</u>	Type CJP series, single-phase and three-phase, 15 and 25 kV
<u>Rough Rider Industries</u>	Series RUF93
<u>Shallbetter</u>	SPMS Series (dead-front)

NOTE:

1. The above enclosures are available with various multipoint terminations. The owner should specify termination points to be provided.
2. These enclosures have been certified as meeting the requirements of ANSI C57.12.28. A copy of the certification is available from the manufacturer.

U hv - Cable, Underground

600 Volt Cable

(Alternative Cable Constructions)

Applicable Specification: RUS Specification U-2 (except as indicated below)

NOTE: Manufacturers listed below are conditionally accepted for alternatives A, B, C, and/or D for the products listed on pages U hv-2 and U hv-3.

Alternative A: 8000 series aluminum alloy in accordance with ASTM B800 or B801.

Alternative B: Stranding in accordance with ASTM B786 for aluminum 1350 conductors or ASTM B787 for copper conductors.

Alternative C: Abuse resistant (ruggedized) (single or two layer) insulation in accordance with ICEA S-81-570.

Alternative D: Self-healing

Alternative E: Stranding in accordance with ASTM B 901 for Compressed Round Stranded Aluminum Conductors Using Single Input Wire Construction

Condition: To obtain experience.

<u>Manufacturer</u>	<u>Alternative</u>
Alcan	(A) (C)
BICC	(A) (C)
Pirelli	(A) (C) (D)
Nexans	(C)
Southwire	(A) (B) (C) (D) (E)